UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,997	12/27/2000	Roy Kenneth Chrisop	SLA.0290	6874

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EXAMINER
DIVINE, LUCAS

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   1 – 5 and 7 – 12 are pending.

Response to Arguments

2.   Applicant's arguments with respect to claims 1 – 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 – 5 and 7 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danknick (US 6856416) in view of Yoshida (US 6130757).

Regarding claim 7, Danknick teaches a method of dynamic performance determination of network connected output devices, comprising:

entering a multi-copy print job at a first network device (e.g. 110, Fig. 1; col. 4 lines 52-63), including loading a multi-copy print job into the first network device (loaded via fax/modem 210 or LAN interface 215 or Comm Intrfce 205) and storing the multi-copy print job in the first network device (storing in RAM 250 or Disk 280, Fig. 2);

querying output devices (e.g. devices 112a, 112b Fig. 1) on the network to determine

each output device's characteristics (col. 5 lines 57-58; col. 6 lines 1-7) and pending print jobs

(col. 6 lines 8-14) to determine if a specific output device is capable of performing a portion of

the multi-copy print job (if the device is 'eligible' col. 5 lines 57-58);

transmitting a portion of the multi-cop print job to each capable output device which is

selected to print a portion of the multi-copy print job (col. 4 lines 49-50; col. 6 lines 13-14,

wherein the selected output devices are called 'assigned MFPs');

reporting the completion of a single copy of the multi-copy print job by each selected

output device to the transmitting device (col. 5 lines 22-24, wherein the host 110 receives reports

back as copies are completed by each device; col. 6 lines 26-34; col. 7 lines 53-57); and

determining, from said reporting completion, by the first network device, a number of

copies of the multi-copy print job to be printed by each selected output device (based on the

reporting back of the MFPs, the system is 'dynamically' and 'continually' load balancing; col. 5

lines 17-18; col. 6 lines 46-61; col. 8 lines 1-14; col. 8 lines 35-67; col. 9 lines 1-20; Fig. 5; and

throughout, the purpose of the patent is for dynamic load balancing for a tandem printing system

– note the report also helps determine the speed of the output devices for rebalancing

accordingly).

While Danknick teaches the device performing the steps above is a server device,

Danknick does not specifically teach that the server functionalities could be located in an MFP

themselves.

However, Yoshida teaches a multi-function peripheral that can act as a printer server or a

printer client for controlling other network image forming devices, thus including image forming

and printer server related functions (multi-function device 1 as shown in Fig. 1; col. 4 lines 30-31 and 43-45; col. 9 lines 1 and 15-16; further discussed throughout in the operations performed in each functionality).

It would have been obvious to one of ordinary skill in the art that an MFP 112a (or b) of Danknick could have performed all of the print server steps of host 110 as is taught by Yoshida. The motivations for doing so would have been to reduce complexity by having all functionality needed at one device instead of two, reduce transmission time with less intermediate steps, reduce costs with less hardware, and any of the MFPs could act as servers, thus allowing the system to be highly efficient. Another example is where a user walks up to MFP 112a and sets up a 1000 copy job at the immediate copier, the device 112a would be able to directly transmit and manage copies of the job at 112b with out the waste and time constraints of sending and working with data in the host 110.

Regarding claims 1 and 5, claim 7 teaches all of the method steps of claims 1 and 5 and they are rejected for the same reasons as stated above in the rejection of claim 7.

Regarding claims 2 and 8, which depend from claims 1 and 7, Danknick teaches optimizing the number of copies to be printed by all selected output devices after all of the other selected output devices have reported to the first network output device (since the system of Danknick teaches continual and dynamic optimizations after receiving reports back from MFPs [e.g. col. 6 lines 25-30, e.g. col. 8 lines 35-50, and basically discussed throughout], the system thus optimizes after hearing from one report, two reports, ..., and all reports; for example if there are two devices, one prints faster than the other and device 1 prints 1 copy and has it reported, 2

copies and then device 2 prints its first, it would report, the system of Danknick would be able to optimize at each stage before and after all of the devices have reported).

Regarding claims 3 and 9, which depend from claims 1 and 7, Danknick teaches optimizing the number of copies to be printed by all selected output devices (continually monitors and optimizes [col. 5 lines 17-24, col. 8 lines 35-52, step 435 and also cited lines below]) after a predetermined amount of time has passed from said transmitting (if had an error and couldn't complete first copy after it had been transmitted to the queue for that MFP, the host waits a predetermined time to see if it becomes available to finish [col. 6 lines 35-45, col. 7 line 4, col. 8 line 12, step 425] – plus, in the method of col. 8 lines 35-67 if the first device doesn't ever finish a first copy and the second device finishes many, the job will thus be rerouted to devices that are able to finish copies faster) and wherein the number of copies to be printed is allocated only among the first network output device and such other selected output devices which have reported the completion of printing the first copy of the entered multi-copy print job (assigns that portion of the job to another assigned MFP [col. 6 line 40, step 315, col. 5 lines 62-64, col. 8 lines 35-51, col. 7 lines 5-10]).

It would have been obvious to one of ordinary skill in the art to set a predetermined time (or number of polls from first transmission) that cuts off certain devices if their 'slower rate' (col. 8 line 52) is at an unacceptable rate. Danknick clearly speaks of wanting to print jobs as fast as possible (col. 1 lines 41-42, col. 5 lines 4-6). Danknick also speaks of setting predetermined times so that the host isn't waiting forever to see if certain copies will be able to be output. Thus, the same logic applies to the issue of 'slower rate' in col. 8 lines 40-52 – if a job is going at such a slow rate it exceeds a certain predetermined time, it would have been

obvious to one of ordinary skill in the art to thus stop trying to print and reroute the job to a faster device in order to complete the job in a faster time.

Regarding claims 4 and 10, which depend from claims 1 and 7, the combination teaches wherein the number of copies to be printed exceeds a predetermined number (col. 5 line 13, wherein a multi-copy print means the copies exceed that predetermined number), and

wherein the first network output device initiates printing on itself (in the combined system, since the host would be in an MFP, it would be able to initiated printing on itself) and each of the other selected output devices as other selected output devices report completion of their first copy of the entered print job (the system is one of dynamically and continually initiating printing/rerouting and adjusting printing for performance, including before, during, and after reporting by the various device [col. 5 lines 15-65, col. 6 lines 25-45, col. 7 lines 30-60, col. 8 lines 22-62, col. 9 lines 1-15]) and

wherein the first network output device makes a final determination of the number of copies which each selected output device is to print after all of the other selected output devices have reported (at sometime after all the devices have reported, there must be one final adjustment made for the last few copies in the job).

Regarding claims 11 and 12, which depend from claims 1 and 7, both Danknick and Yoshida teach the output devices are multi-function peripherals (which in and of itself is a copier and a printer as well).

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Motamed et al. (US 6930795) teaches printing method and apparatus having multiple

raster image processors including load balancing in multi-copies jobs, see col. 5.

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The

examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd

KING Y. POON
PRIMARY EXAMINER